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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/915,091	07/25/2001	Timothy M. Schmidl	TI-31670	5570
23494	7590	10/08/2010		
TEXAS INSTRUMENTS INCORPORATED				
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EXAMINER				
DANIEL JR, WILLIE J				
ART UNIT		PAPER NUMBER		
2617				
NOTIFICATION DATE		DELIVERY MODE		
10/08/2010		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

uspto@ti.com

Office Action Summary**Application No.**

09/915,091

Applicant(s)

SCHMIDL ET AL.

Examiner

WILLIE J. DANIEL JR

Art Unit

2617

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 June 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 43-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 43-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This action is in response to applicant's amendment filed on 08 June 2010. **Claims 43-48** are now pending in the present application and **claims 1-42** are canceled. The BPAI decision has affirmed prior rejection of claims 1, 5-13, 16-17, 19, and 21 (i.e., appealed claims 1-3 and 5-32). This office action is made **Non-Final**.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 08 June 2010 has been entered.

Specification

3. The use of the trademark "...BLUETOOTH..." has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 43 and 46 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a. **Claims 43 and 46** include the limitation(s) "...a **standard** wideband..." as recited in line(s) 1 of claim 43. Example 1, the orig. spec. on pg. 5, line 7, recites "...a wide band channel is assigned...", which basically describes assigning a wideband channel. What wideband standard is referenced, if any? The applicant on pg. 5, 3rd full par. of remarks section states, "...in paragraph [0003]..." (i.e., orig. spec. pg. 1, lines 13-19) as a cited area of support for the claimed limitation. The cited area does not mention which standard is specifically applied of the various standards/protocols or any similar language.
- b. **Claim 46** recites the limitation(s) "...include IEEE 802.11b, Bluetooth 1.0, and Bluetooth 2.0..." as recited in line(s) 2 of the claim.

Note: The use of "*protocols*" (for example, Bluetooth and 802.11), protocols and standards change over time, hence, it is inappropriate to have the scope of a claim change with time. Since organizations implementing standards meet regularly and have the authority to modify standards, any connection a claim may have to these standards may have varying scope over time. The other aspect arising from this is enablement. If the standard changes, the disclosure may no longer support the limitation. If the scope of the invention sought to be

patented cannot be determined from the language of the claims, a 35 U.S.C. 112 second paragraph of rejection is appropriate (In re Wiggins, 179 USPQ 421).

Regarding **claims 43 and 46**, the applicant appears to be claiming and relying on a standard to provide novelty. The applicant is advised to review the subject matter of the specification (see pg. 1, line 15-17; pg. 4, lines 9-14; pg. 5, lines 3-6), which states IEEE std 802.11b, Bluetooth 1.0, and Bluetooth 2.0. Example 3, applicant in claims 43 and 46 recites the limitation without the instant application referencing (or defining) a particular version (e.g., **predetermined version and/or date**). The Examiner respectfully requests the applicant to provide page(s), line(s), and figure(s) of the instant application that supports and clearly define the limitation(s) of the claim(s) and/or any supportive comment(s) to help clarify and resolve this issue(s).

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 43-48 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 43 is drawn to a "...method..." *per se* and considered non-statutory subject matter.

a. Claim 43 recites the limitation

"...determining...observing...repeating...summing...selecting..." in line(s) 5-16 of the claim. Example 4, a user can determine a new channel is needed by reading a

testing device (e.g., meter or oscilloscope) for noise or interference in a signal or by hearing the sound of noise (e.g., static, or interference), adjust a tuner (or scanner) to a channel and subsequent channels, observe the channel and subsequent channels via a testing device, and write on paper the value of interference per channel, and sum the values of interference. What component(s), if any, performs the steps of the claim?

Regarding **claim 43**, the claim fails to properly meet the condition of being “tied to” a particular *machine* or *apparatus* in order to establish a statutory process (or method) claim. The claim should positively recite the other statutory class (i.e., the thing or product) to which it is tied, by identifying the *apparatus* that accomplishes the method step, or positively recite the subject matter that is being transformed by identifying the material that is being changed to a different state. **The Examiner recommends that the applicant clarify the claim language as supported by the specification.**

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 43-45 and 47-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Van De Berg** (hereinafter Berg) (US 5,907,812) with further support by **Salonaho et al.** (hereinafter Salonaho) (US 6,594,495 B2).

Regarding **claim 43**, Berg discloses a process of selecting a standard wideband wireless communication channel from among standard wideband wireless communication channels, in which each standard wideband wireless communication channel is formed of narrowband channels { (see abstract; col. 2, line 65 - col. 3, line 6; col. 3, lines 38-48; Figs. 2 & 4), where the radio communications system has carrier frequency bands }, comprising:

A. determining that a new standard wide band channel (e.g., C^1) is needed { (see col. 3, lines -6, 11-17; col. 5, lines 8-12; col. 9, lines 9-30; Figs. 2, 4, & 7-9) };

B. tuning a filter to a selected narrowband channel (e.g., $C_{2,6}$) of one standard wideband channel { (see abstract; col. 2, line 65 - col. 3, line 6; col. 3, lines 38-48; col. 4, lines 27-39; col. 5, line 52 - col. 6, line 2; col. 6, lines 20-40; col. 7, lines 48-65; col. 9, lines 4-17; col. 12, lines 41-51; Figs. 2, 4, & 7-9), where a filter would be implicit in order to process each of the available bands in which a filter must be tuned to each available frequency band (see abstract; col. 9, lines 3-21; col. 12, line 40 - col. 13, line 5; Figs. 2, 4, & 7-9) };

C. observing the channel quality (e.g., interference) of the selected narrowband channel { (see abstract; col. 2, line 65 - col. 3, line 17; col. 3, lines 38-48; col. 4, lines 27-39; col. 6, lines 29-39; col. 7, lines 48-65; col. 9, lines 4-17; Figs. 2, 4, & 7-9), where the system measures interference and scans };

D. repeating the steps of tuning and observing for the narrowband channels in the one standard wideband channel { (see abstract; col. 2, line 65 - col. 3, line 17; col. 3, lines 38-48; col. 4, lines 27-39; col. 5, line 52 - col. 6, line 2; col. 6, lines 20-40; col. 7, lines 48-65; col. 9, lines 4-17; col. 12, lines 41-51; Figs. 2, 4, & 7-9), where the system measures interference and scans, and where a filter would be implicit in order to process each of the available bands in which a filter must be tuned to each available frequency band (see abstract; col. 9, lines 3-21; col. 12, line 40 - col. 13, line 5; Figs. 2, 4, & 7-9) };

E. the observed channel qualities of the narrowband channels observed in the one standard wideband channel { (see col. 6, lines 29-39; col. 9, lines 4-44; Fig. 7 "ref. 2-6"), where the results of the scanning are combined (e.g., implies summing) to determine an interference-free frequency band of the carrier frequency bands };

F. repeating the steps of tuning, observing, repeating and summing for the narrowband channels of another, different standard wideband channel { (see abstract; col. 9, lines 3-21; col. 12, line 40 - col. 13, line 5; Figs. 2, 4, & 7-9) }; and

G. selecting the one or the other standard wideband channel based on the summed narrowband channel observations for each standard wideband channel { (see abstract; col. 3, lines 1-6, 11-17; col. 5, lines 8-12; col. 5, line 52 - col. 6, line 2; col. 9, lines 9-30; col. 12, lines 41-60; Figs. 2, 4, 7-9, & 11-13), where the bandwidth (e.g., 1 MHz & 5 MHz) of the at

least one available frequency band is selected, if deemed acceptable, to form, by itself or in combination with other acceptable available frequency bands, the at least one frequency band for the desired communication (see col. 7, lines 19-32; col. 8, lines 50-56; col. 9, lines 1-30; Fig. 7) }. Berg does not specifically disclose having the feature(s) summing the observed channel qualities. However, the examiner maintains that the feature(s) summing the observed channel qualities was well known in the art, as taught by Salonaho.

As further support in the same field of endeavor, Salonaho at the least discloses the feature summing the observed channel qualities { (see col. 3, lines 38-54; col. 4, lines 9-14; col. 1, lines 34-38) }.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Berg as further supported by Salonaho to have the feature summing the observed channel qualities, in order to provide a method and system in which a load can be optimally controlled to prevent overload situations and improve connection quality, as taught by Salonaho (see col. 2, lines 23-29).

Regarding **claim 44**, the combination of Berg and Salonaho discloses every limitation claimed, as applied above (see claim 43), in addition Berg further discloses the process of claim 43 in which observing the channel quality includes observing interference in the narrowband channel { (see abstract; col. 2, line 65 - col. 3, line 17; col. 3, lines 38-48; col. 4, lines 27-39; col. 6, lines 29-39; col. 7, lines 48-65; col. 9, lines 4-17; Figs. 2, 4, & 7-9), where the system measures interference and scans }.

Regarding **claim 45**, the combination of Berg and Salonaho discloses every limitation claimed, as applied above (see claim 43), in addition Berg further discloses the process of

claim 43 in which the observing the channel quality includes observing the RSSI measurement in the narrowband channel { (see col. 6, lines 33-37) }.

Regarding **claim 47**, the combination of Berg and Salonaho discloses every limitation claimed, as applied above (see claim 43), in addition Berg further discloses the process of claim 43 in which the selecting includes selecting at a receiver { (see col. 10, lines 17-41; Figs. 7-10) }.

Regarding **claim 48**, the combination of Berg and Salonaho discloses every limitation claimed, as applied above (see claim 43), in addition Berg further discloses the process of claim 43 in which the selecting includes selecting at a receiver and at a transmitter { (see col. 10, lines 17-41; Figs. 7-10) }.

Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Van De Berg** (hereinafter Berg) (**US 5,907,812**) with further support by **Salonaho et al.** (hereinafter Salonaho) (**US 6,594,495 B2**) as applied to claim 43 above, and further in view of **Souissi et al.** (hereinafter Souissi) (**US 6,327,300 B1**) and **Applicant's Admitted Prior Art** (hereinafter AAPA).

Regarding **claim 46**, Berg the process of claim 43 in which the standard wideband channels { (see col. 3, lines -6, 11-17; col. 5, lines 8-12; col. 9, lines 9-30; Figs. 2, 4, & 7-9) }. Berg does not specifically disclose having the feature(s) channels include IEEE 802.11b, Bluetooth 1.0, and Bluetooth 2.0 systems. However, the examiner maintains that the feature(s) channels include Bluetooth 1.0 and Bluetooth 2.0 systems was well known in the art, as taught by Souissi.

In the same field of endeavor, Souissi discloses the feature(s) channels include Bluetooth 1.0 and Bluetooth 2.0 systems { (see col. 2, lines 54-56; col. 4, lines 16-19) }.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Berg, Salonaho, and Souissi to have the feature(s) channels include Bluetooth 1.0 and Bluetooth 2.0 systems, in order to efficiently use the given section by dynamically allocating spectrum, as taught by Souissi (see col. 1, lines 36-40; col. 3, lines 37-44). The combination of Berg, Salonaho, and Souissi does not specifically disclose having the feature(s) channels include IEEE 802.11b system. However, the examiner maintains that the feature(s) channels include IEEE 802.11b system was well known in the art, as taught by AAPA.

In the same field of endeavor, Souissi discloses the feature(s) channels include IEEE 802.11b system { (see orig. spec. pg. 1, lines 15-17) }.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Berg, Salonaho, and Souissi to have the feature(s) channels include IEEE 802.11b system, in order to communicate with 2.4 GHz ISM band, as taught by AAPA (see orig. spec. pg. 1, lines 15-17).

Response to Arguments

7. Applicant's arguments with respect to claims 37-42 have been considered but are moot in view of the new ground(s) of rejection necessitated by the new claims.

In response to applicant's arguments, the Examiner respectfully disagrees as the applied reference(s) provide more than adequate support and to further clarify (see the above claims for relevant citations).

8. The Examiner requests applicant to provide support (e.g., page(s), line(s), and drawing(s) as well as comments) for the amended claim language and any further amended claim language.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to WILLIE J. DANIEL JR whose telephone number is (571)272-7907. The examiner can normally be reached on 8:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Appiah can be reached on (571) 272-7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information

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about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Willie J. Daniel, Jr./
Examiner, Art Unit 2617

WJD,Jr
01 October 2010